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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/771,714	02/04/2004	Mark J. Cleaver	0232W/00028-U	4133

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EXAMINER

SAWHNEY, HARGOBIND S

ART UNIT PAPER NUMBER

2875

DATE MAILED: 07/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/771,714

Applicant(s)

CLEAVER ET AL

Examiner

Hargobind S. Sawhney

Art Unit

2875

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 April 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6/3/05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. The response to the office action and the terminal disclaimer each filed on April 26, 2005 has been entered. Additionally the information disclosure statement filed on June 03, 2005 has been entered.
2. The serial number 10/771,714 of the instant application has been erroneously indicated in section 2 of the non-final office action mailed on April 19, 2005. In the non-final office, the instant application has been erroneously identified as 10/670,003. With the above-indicated correction, the double patenting rejections presented in the previous non-final office action still stays valid.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-4, 7-10 and 13-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Takeichi (English translated Japanese Patent Application Pub. No.: JP 61165583), hereinafter referred as Takeichi.

Note: The information disclosure statement (IDS) filed on June 3, 2005 includes the English translated Japanese Patent Application Pub. No.: JP 61165583).

Regarding Claims 1-4, 7-10 and 13-15, Takeichi discloses an illumination device comprising:

- a substantially rod-like member 3 (Figure 1, Takeichi, page 3, line 22) having a predetermined length with a light receiving surface – the surface adjacent to the light-emitting surface of the light-emitting element 1 (Figure 1, Takeichi, page 3, line 22);
- the rod-like member 3 composed of substantially flexible compound impregnated with filler deflecting light and producing uniform light intensity pattern (Figure 1, Takeichi, page 3, line 22; and page 5, lines 5 and 6);
- an elongated and substantially flexible light source 1 – a plurality of light emitting elements connected with a flexible conductive wire 2 – positioned adjacent to the light receiving surface (Figure 1, Takeichi, page 3, line 21);
- the light, emitted from the light-source 1, entering the rod-like member 3 through the light receiving surface, being scattered (Figure 1, Takeichi, page 5, lines 6 and 7);
- the flexible compound made of silicone rubber (Figure 1, Takeichi, page 4, line 23);
- a housing 33 enclosing the light source 1; the housing positioned below and extending along the rod-like member 3 (Figure 1, page 5, line 6);
- the housing 33 including a pair of side walls – the upper portions of the walls of the left and right halves of the housing 33 (Figure 1, page 5, line

- 6) - defining an open-ended channel extending substantially the predetermined length of the rod-like member 3 (Figure 1);
- the housing 33 further including a floor portion - the lower portion common to the side walls of the left and right halves of the housing 33 (Figure 1, page 5, line 6)- defining substantially U-shape of the housing 33 (Figure 1 and 2);
- the housing 33 further including internal surface 32 with a light –reflective material (Figures 1 and 2, Takeichi, page 4, lines 25-27);
- the light source 1 including a multiplicity of spaced point- light sources extending along the light-receiving surface of the rod-like member 3 (Figure 1, Takeichi, page 3, lines 23-27);
- the multiplicity of point-light sources being LEDs (Figure 1, Takeichi, page 4, lines 2 and 3); and
- the rod-like member 3 defining an internal channel – the longitudinal space housing the multiplicity of spaced LEDs (Figure 1).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takeichi (English translated Japanese Patent Application Pub. No.: JP 61165583), hereinafter referred as Takeichi, in view of Zamja et al. (US Patent No.: 4,195,907).

Regarding claims 5 and 6, dependent on claims 2 and 4 respectively, Takeichi discloses an illumination device comprising the rod-like member composed of substantially flexible compound impregnated with filler deflecting light.

However, Takeichi does not specifically teach the rod-like member additionally include micro air balloons.

On the other hand, Zamja et al. ('907) discloses a light-conducting rod-like member 94 formed of a flexible material having micro air- balloons 92 (Figures 3 and 5, column 3, lines 22-28).

It would be have been obvious to one of ordinary skill in the art at the time of the invention to further modify the device of Takeichi by providing the rod-like member composed of a flexible material with impregnated micro air-balloons as taught by Zamja et al. ('907) for benefit and advantage of providing lateral reflection of light for decorative effects.

7. Claims 11, 12, 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takeichi (English translated Japanese Patent Application Pub. No.: JP 61165583), hereinafter referred as Takeichi, in view of Luk (US Patent No.: 6,846,094 B2).

Regarding claims 11 and 16, dependent on claims 8 and 15 respectively, Takeichi discloses an illumination device comprising a rod-like member optically coupled with spaced plurality of LEDs electrically connected with one another.

However, Takeichi does not specifically teach the illumination device including a flexible circuit board bearing the plurality of LEDs.

On the other hand, Luk ('094 B2) discloses a flexible LED lighting device 10 (Figure 1) including a flexible circuit board 24 bearing a plurality of LEDs 36 spaced from one another (Figure 1, column 5, Lines 23, 28 and 36-38).

It would be have been obvious to one of ordinary skill in the art at the time of the invention to further modify the rod-like member of Takeichi by providing flexible circuit board bearing a plurality of LEDs as taught by Luk ('094 B2) for benefit and advantage of reduction in manufacturing cost, and easy forming of the device to a desired shape.

Regarding each of claims 12 and 17, dependent on claims 11 and 16 respectively, Takeichi in view Luk ('094 B2) of discloses an illumination device comprising a rod-like member optically coupled with spaced plurality of LEDs electrically connected with one another. Additionally, Takeichi in view Luk ('094 B2) teaches securing the plurality of LEDs mounted on a flexible circuit board with filling of the light-transmitting casting material of the flexible bar-like casting (Figure 1, Takeichi, page 3, line 22).

8. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takeichi (English translated Japanese Patent Application Pub. No.: JP 61165583), hereinafter referred as Takeichi, in view of Ghandehari (US Patent No.: 5,537,297).

Takeichi discloses an illumination device comprising a rod-like member optically coupled with spaced plurality of LEDs electrically connected with one another.

However, Takeichi does not specifically teach the illuminating device including a rod-like member further including a collection surface adjacent a portion of the outer surface of the rod-like member, and the collection surface positioned near the light source.

On the other hand, Ghandehari ('297) discloses a reflecting lighting device including a rod-like member 12 including a collection surface 50 positioned near a light source 15 (Figures 1-3, column 3, lines 17-21 and 55- 55-59).

It would be have been obvious to one of ordinary skill in the art at the time of the invention to modify the rod-like member of Takeichi by with a collection surface as taught by Ghandehari ('297) for benefit and advantages of controlling the direction of the light reflected through the rod-like member.

9. Claims 19-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takeichi (English translated Japanese Patent Application Pub. No.: JP 61165583), hereinafter referred as Takeichi, in view of Luk (US Patent No.: 6,846,094 B2).

Regarding claims 19-24, Takeichi in view Luk ('094 B2) of discloses an illumination device comprising:

- a substantially rod-like member 3 (Figure 1, Takeichi, page 3, line 22) having a predetermined length with a light receiving surface – the surface adjacent to the light-emitting surface of the light-emitting element 1 (Figure 1, Takeichi, page 3, line 22);

- the rod-like member 3 composed of substantially flexible compound impregnated with filler deflecting light and producing uniform light intensity pattern (Figure 1, Takeichi, page 3, line 22; and page 5, lines 5 and 6);
- securing the plurality of LEDs mounted on a flexible circuit board with filling of the light-transmitting casting material of the flexible bar-like casting (Figure 1, Takeichi, page 3, line 22);
- the housing 33 including a pair of side walls – the upper portions of the walls of the left and right halves of the housing 33 (Figure 1, page 5, line 6) – defining a volume adjacent the light receiving surface (Figure 1);
- the housing 33 receiving elongated light source including a plurality of LEDs linearly spaced from one another (Takeichi, Figure 1); and
- the housing 33 further including internal surface 32 with a light –reflective material (Figures 1 and 2, Takeichi, page 4, lines 25-27).

It would be have been obvious to one of ordinary skill in the art at the time of the invention to meet the method limitations of claims 19-24 by applying the above-indicated teachings of Takeichi and Luk ('094 B2).

Response to Amendment

10. The Terminal Disclaimer filed on April 26, 2005 has been approved. However, this non-final office action includes 35 U.S.C. 102(b) rejections of claims 1-4, 7-10 and 13-15; and 35 U.S.C. 103(a) rejections of claims 5, 6, 11, 12 and 16-24. The above-

indicated rejections are based on the new ground using prior arts Takeichi (English translated Japanese Patent Application Pub. No.: JP 61165583) and Luk (US Patent No.: 6,846,094 B2).


Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hargobind S. Sawhney whose telephone number is 571 272 2380. The examiner can normally be reached on 6:15 - 2:45.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on 571 272 2378. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HSS
7/6/05


Stephen Husar
Primary Examiner